

## **CCI 644: Advanced Quantitative Methods**

College of Communication and Information  
The University of Tennessee

**INSTRUCTOR:** Elizabeth Johnson Avery, Ph.D.  
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**OFFICE HOURS:** 2:00-4:00 Tuesdays, and by appointment  
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**MEETING:** Tuesday and Thursday, 9:40-10:55, Room 420

### **Catalog Description**

Advanced theory and application of quantitative research methods to communication and information.

### **Prerequisites**

CCI 631 or consent of instructor.

### **Course Description**

This course extends the coursework and understanding of quantitative research methods from CCI 633 (or equivalent) by examining these methodologies in greater detail. Further, we will examine the entire research process – study design, data collection, data analysis, data reporting – and we will hone critical thinking in this area through critiques of existing research. We will review and extend multivariate data analysis in SPSS.

### **Course Goals and Objectives**

Upon the completion of this course, students should be able to:

- expand understanding regarding the application of theory to a research question.
- critically evaluate communication and information research from a methodological standpoint.
- conceptualize and design your own research project.
- identify different research methods that may be used, including, but not limited to, survey research, experiments, and content analysis.
- identify, run, and report quantitative analyses in SPSS proficiently.
- understand measurement error and ways to overcome this problem.

## **OPEN RECORDS ACT**

This course adheres to the University's policy regarding the use and release of student records that are governed by Public Law 93-380, the Family Educational Rights and Privacy Act and the Tennessee Public Records Act, which charges the University and its employees with protecting the confidentiality of the educational records of its prospective, current, and former students.

## **Tolerance and Diversity**

CCI recognizes and values diversity. Exposing students to diverse people, ideas, and cultures increases opportunities for intellectual inquiry, encourages critical thinking, and enhances communication and information competence. When all viewpoints are heard, thoughtfully considered, and respectfully responded to, everyone benefits. Diversity and fairness unite us with the wider professional and global community.

## **Students with Disabilities**

Students with documented disabilities should notify the instructor immediately to discuss requests for special provisions. Students who have a disability that requires accommodation should make an appointment with the Office of Disability Services, 2227 Dunford Hall, (974-6087) to discuss specific needs and get official documentation of the disability.

## **Required Textbook**

Singleton, Jr., R. A., & Straits, B. C. (2010). *Approaches to social research* (5<sup>th</sup> Ed.) New York: Oxford Press:

## **Required Readings**

Readings for this class from the assigned textbook are noted on the attached schedule; they will be posted on Blackboard under Course Materials. There will be additional readings that are assigned as the course progresses.

## **Presentations**

Each student will be responsible for one 30-45 minute presentation on a given methodological topic. In addition to the assigned reading, the presenter will introduce other information from outside research. As part of the assignment, each student will provide a reading on the topic to the class at least one week prior to their presentation. Pretend you are preparing and giving a miny lecture on the topic; it should extend what your classmates have learned in the required materials. These will be given on Tuesdays. I want YOU to choose the most important information to include, thus the lack of specificity, then engage, interest, and inform the class. The topics include:

- Presentation #1 - Levels of Measurement
- Presentation #2 - Validity Introduction and Assessment
- Presentation #3 - Response Effects
- Presentation #4 - Missing Data

## Assignments of the Week

There will be 6 “assignments of the week” which will expand on the discussions from the prior week’s class. Each student will write a 2 – 3 page paper on a research study, which either explains or utilizes the concept discussed in class. At the beginning of class, one student will be randomly selected to present and discuss their paper to the class. Please attach a copy of the published study to your paper.

## Article Reviews

You will each complete a review of a scholarly journal article provided to you. Peer review is a critical part of the research process. The service effort is extensive but also a vital contribution to the field. The process of peer review is extremely important to your growth as a researcher, as you learn from the strengths and weaknesses of others’ work. I will give you an article to write a 5-6 page review of (double-spaced). I want you to critique all sections of the article, with special attention on the methods section. Consult reviews you have received or perhaps others that colleagues are willing to share.

## Research Mapping Assignment

Learning to “map out” my research ideas has been one of the most useful and worthy investments of my time as a researcher. I urge you to do this for your dissertations. First, write an abstract for your study (we will discuss this later). Then write out each hypothesis and RQ you will test and answer. Follow some standard format in your presentation of those to illustrate each variable and, within that H or RQ, the DVs and IVs. Next, list each variable, and put the question number/s from your survey instrument that you will use to measure that variable. If it is a validated measure, give the citation/s for how it has been used. Next include the instrument. For any questions that were not correlated to a variable, explain why that question is present or needed. Page numbers will vary dramatically; the content and including all of the above information is the important part.

## Final Paper

The final paper/assignment in the class is a conference quality experimental or survey design paper. Further details on this paper and study will be discussed in class.

## Assignments and Grading Weight

Due dates are listed on the syllabus.

Participation	50 points
Assignment of the Week	90 points (15 x 6)
Peer Review Assignment	50 points
Presentations	60 points
Research Mapping Assignment	50 points
Final Paper	100 points
TOTAL	400 points

The following grading scale will be observed in calculating final averages:

A	90% and Above
B+	88-89.9%
B	83-87.9%
B	80-82.9%
C+	78-79.9%
C	73-77.9%
C-	70-72.9%
D+	68-69.9%
D	63-67.9%
D-	60-62.9%
F	59.9% and Below

## Course Policies

**Attendance:** Students are expected to attend classes regularly and promptly and are responsible for all work done in class if absent. Further, students should have read the assigned material prior to class and be prepared to participate. Attendance is mandatory for all student presentations. After two absences, 10 points will be deducted from the participation score for each further absence.

**Late Assignments:** Late assignments or exams are not accepted, except for in rare cases with **PRIOR** approval from the Instructor. For required, non-graded assignments, students who do not complete the assignment may have up to 5 points deducted from their final grade. Assignments are due at the beginning of the class.

**Sources:** Only published articles from peer-reviewed journals are considered to be acceptable sources. On line resources such as Wikipedia are not to be used as sources in your assignments.

## Final Project Timeline

January:	Pick Topic. Work on Questionnaire.
February:	Submit IRB application by February 9. Work on experimental design.
March:	Mid-March to early April- collect data.
April:	Write up the report.

## Course Schedule

*Instructor reserves the right to adjust schedule as needed.*

January 14	Introduction to the Course	
January 19-21	Theoretical Reasoning; Research Methodologies Planning Research; Reliability and Validity Considerations in Research Theory, Measurement and Sampling <ul style="list-style-type: none"> <li>• Neuman, W., Davidson, R., Joo, S., Park, Y. and Williams, A. E. (2008). The seven deadly sins of communication research. <i>Journal of Communication</i>, 58, 220-237.</li> <li>• Shapiro, M. (2002). Generalizability in communication research. <i>Human Communication Research</i>, 28, 491-500.</li> <li>• Thayer, L. (1983). On “doing” research and “explaining” things. <i>Journal of Communication</i>, 33, 80-91.</li> </ul>	
	Social Measurement	Reading: Chapters 1 & 2
January 26-28	Levels of Measurement Presentation #1	Reading: Chapters 4 & 5 Assignment of the Week #1
February 2-4	Research Ethics External Validity Sampling Presentation #2 <ul style="list-style-type: none"> <li>• Podsakoff et al., (2000). “Common Method Biases...”</li> </ul>	Reading: Chapter 3 & 6 Assignment of the Week #2
February 9-11	Survey Design Presentation #3 <ul style="list-style-type: none"> <li>• Schwarz, N. (1999). “Self Reports.”</li> </ul>	Reading: Chapter 9 & 10 Assignment of the Week #3 Final Paper topic – DUE
February 16-18	Experimentation Presentation #4	Chapter 7 & 8 Assignment of the Week #4
	In lieu of the February 18 class, please plan on required attendance at CCI symposium; more later.	
February 23-25	Experimentation- Continued CCI RESEARCH SYMPOSIUM IS FEBRUARY 24. <b>RESEARCH MAPPING ASSIGNMENT DUE 2/25</b>	
March 1-3	Content Analysis	Assignment of the Week #5

- Lombard, M., Snyder-Duch, J., Campanella Bracken, C. (2002). Content analysis in mass communication: Assessment and reporting of intercoder reliability. *Human Communication Research*, 28 (4), 587 – 604.
- Potter, J.W., Levine-Donnerstein, D. (1999). Rethinking validity and reliability in content analysis. *Journal of Applied Communication Research*, 27, 258- 284.

March 8-10	Peer Review Process Observational & Behavioral Coding Mixed Methods	Reading: Chapter 11 & 13 Assignment of the Week #6 Peer Review Assignment
March 15-17	SPRING BREAK	
March 22-24	Multivariate Analysis Error	Chapter 15 & 16
March 29-31	Data Analysis and Screening Frequencies, Descriptives, Chi-Square, T-Tests, Crosstabs	Reading: TBA <b>Peer Review Assignment Due 3/29</b>
April 5-7	ANOVA/MANOVA	Reading: TBA
April 12-14	Regression	
April 19-21	Factor Analysis	
April 26-28	Writing the Report <b>Final Papers Due April 28</b>	Chapter 17

### FINAL PRESENTATIONS

Thursday, May, 5, 2013 – 8:00-10:00 AM (subject to change)